

IN THE TITLE

Please delete the title in its entirety and insert --- METHOD OF GENERATING OPTICAL ASSIST FEATURES FOR TWO-MASK EXPOSURE LITHOGRAPHY --- therein.

IN THE CLAIMS

Please cancel without prejudice the previously withdrawn claims 1-15 as being drawn to a non-elected invention.

Please amend claim 16.

Please enter the pending claims as follows:

1. – 15. (Cancelled)

16. (Currently Amended) A method comprising:

providing design data and design rules for a layout;

converting said design data into primary features for a set of mask patterns;

generating assist features on one of said mask patterns that overlap for said primary features on another of said mask patterns;

checking whether said design rules are violated;

repeating said converting and said generating until said design rules are no longer violated;

verifying whether said mask patterns can be combined to produce said layout;
adjusting said primary features and said assist features until said layout is produced; and
obtaining final mask data for said layout.

17. (Original) The method of claim 16 wherein said mask patterns comprise a binary mask pattern and a phase-shifting mask pattern.

18. (Original) The method of claim 16 wherein said mask patterns comprise a binary mask pattern and an alternating aperture phase-shifting mask pattern.

19. (Original) The method of claim 16 wherein said verifying comprises simulation of lithography, including photoresist apply, exposure, and develop processes, for said primary features and said assist features for said set of mask patterns.

20. (Original) The method of claim 19 wherein said verifying further comprises simulation of etch processes for said primary features and said assist features for said set of mask patterns.

21. (Original) The method of claim 16 wherein said assist features comprise OPC.